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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,938	09/16/2003	Vladimir Pavlovic	200308295-2	2311

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IP Administration  
Legal Department, M/S 35  
Hewlett-Packard Company  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

AZARIAN, SEYED H

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/663,938

**Applicant(s)**

PAVLOVIC ET AL.

**Examiner**

Seyed Azarian

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-39 is/are allowed.
- 6) ☒ Claim(s) 40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/16/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321<sup>©</sup> may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 40, rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, of U.S. Patent No. 6,694,044. Each of the limitation set forth in the claim of the instant application is defined in the claim of the patent.

As an example consider claim 40, of current application, compared to claim 1, of U.S. Patent No. 6,694,044 discloses;

A method for classifying portions of an input sequence of measurements into a plurality of regimes, given a set of possible switching states, comprising (column 33, lines 2-4);

associating each of a plurality of dynamic models with a switching state such that a dynamic model is selected when its associated switching state is true, wherein the switching state at a particular instance is determined by a switching model (column 33, lines 5-9);

decoupling the dynamic model from the switching model (column 3, line 10);

determining parameters of the decoupled dynamic model, responsive to a switching state probability estimate (column 3, lines 12-13);

estimating a state of the decoupled dynamic model corresponding to a measurement at the particular instance, and responsive to the input sequence (column 33, lines 14-16);

determining parameters of the decoupled switching model, responsive to the dynamic state estimate (column 33, lines 17-18);

estimating a probability for each possible switching state of the decoupled switching model (column 33, lines 19-20);

means for determining a switching state sequence based on the estimated switching state probabilities (column 33, lines 21-22);

classifying portions of the input sequence into different regimes, responsive to the determined switching state sequence (column 33, lines 23-25).

### Allowable claims

3. The following is an examiner's statement of reasons for allowance.

The claim 1 representative of claims 15 and 28 is allowable due to associating each of a plurality of dynamic models with one of a plurality of switching states such that a model is selected when its associated switching state is true; determining a state transition record by determining and recording, for a given measurement of the sequence and for each switching state, an optimal prior switching state, based on the input sequence, wherein the optimal prior switching state optimizes a transition probability; determining, for a final measurement, an optimal final switching state; determining a switching state sequence by backtracking, from said

optimal final switching state, through the state transition record; and classifying portions of the input sequence into different regimes, responsive to the switching state sequence.

The invention is novel due to the determining a switching state sequence by backtracking, from said optimal final switching state, through the state transition record; and classifying portions of the input sequence into different regimes, responsive to the switching state sequence.

The closest prior art of record (Cham et al) teaches multiple mode probability density estimation with application to sequential markovian decision processes. But do not suggest switching state sequence by backtracking, from said optimal final switching state, through the state transition record; and classifying portions of the input sequence into different regimes

These key features in combination with the other features of the claimed invention are neither taught nor suggested by the art of record.

Thus, claims 1-39 are allowed.

***Other prior art cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. patent (6,256,418) to Rehg et al is cited for method and system for compressing a sequence of images including a moving figure.

U.S. patent (6,243,037) to Pulford et al is cited for tracking method for a radar system.

U.S. patent (6,480,876) to Rehg et al is cited for system for integrating task and data parallelism in dynamic applications.

U.S. patent (5,923,712) to Leyendecker et al is cited for method and apparatus for linear transmission by direct inverse modeling.

U.S. patent (5,325,098) to Blair et al is cited for interacting multiple bias model filter system for tracking maneuvering targets.

U.S. patent (6,396,878) to Piirainen is cited for reception method and a receiver.

**Contact Information**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (703) 306-5907. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Seyed Azarian*  
Patent Examiner  
Group Art Unit 2625  
December 10, 2004

